Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act	)	**GN Docket No. 11-121**

REPLY COMMENTS OF THE FIBER-TO-THE-HOME COUNCIL
EIGHTH BROADBAND DEPLOYMENT NOTICE OF INQUIRY

The Fiber-to-the-Home Council ("FTTH Council" or "Council"),[1] through its undersigned counsel, hereby respectfully submits its reply comments to the Federal Communications Commission ("Commission") in response to the Eighth Broadband Deployment Notice of Inquiry ("Eighth Notice of Inquiry").[2] In its initial comments, the FTTH

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[1] The FTTH Council is a non-profit organization established in 2001. Its mission is to educate the public and government officials about fiber-to-the-home ("FTTH") and to promote and accelerate FTTH deployment and the resulting quality of life enhancements FTTH networks make possible. The FTTH Council's members represent all areas of the broadband access industry, including telecommunications, computing, networking, system integration, engineering, and content-provider companies, as well as traditional service providers, utilities, and municipalities. As of today, the FTTH Council has more than 210 entities as members. A complete list of FTTH Council members can be found on the organization's website: http://www.ftthcouncil.org.

[2] *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of*

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Council responded to the Commission's inquiry: What is Advanced Telecommunications Capability? It asserted that the new minimum performance capability for advanced communications service established in the Sixth Report – 4 megabits per second ("Mbps") downstream and 1 Mbps upstream – has already become outdated and that to be faithful to the statute and to reflect current market conditions the definition should be amended for wireline broadband service to a performance level of 12 Mbps/2.5 Mbps.[3]

In these replies, the Council addresses several issues raised in the Eighth Notice of Inquiry or initial comments by other parties. First, because there is cogent evidence demonstrating that the nature and performance characteristics of wireline and mobile broadband service differ significantly, each service should be assessed separately for purposes of determining whether advanced telecommunications capabilities are being made available in a reasonable and timely fashion. Moreover, the Council submits that the Commission has the legal authority to conduct a separate assessment of each service. Second, the Council agrees that attributes other than speed are important in considering advanced telecommunications capabilities; however, speed is by far the more critical attribute in today's market. Third, the Council agrees that evolving compression technologies have enabled older networks to wring out greater performance, but, even with these advances, they simply cannot meet the needs of users in accessing high-definition video and other high bandwidth applications.

1996, as Amended by the Broadband Data Improvement Act, Eighth Broadband Progress Notice of Inquiry, GN Docket No. 11-121 (rel. Aug. 5, 2011).

3 *See* Comments of the Fiber-to-the-Home Council, GN Docket No. 11-121 (Sept. 6, 2011) ("FTTH Comments").

A. The Commission should revisit its decision not to assess separately wireline and mobile broadband services and should make such a distinction in the Eighth Broadband Progress Report.

In the *2011 Seventh Broadband Progress Report*, the Commission declined "to adopt technology-specific speed thresholds requested by certain commenters," concluding that "the record in this proceeding does not establish that setting a different speed threshold for different technology would be consistent with" the statute.[4] The Council respectfully urges the Commission to revisit this conclusion. The Commission's reading of the statute[5] is unduly narrow. Terms in the definition of "advanced broadband capability" (*e.g.* whether "users" refers to users of all broadband services or any subset thereof) are sufficiently ambiguous to permit the Commission to interpret them to provide a reasonable policy outcome. After all, the Commission's cramped interpretation leads to an "apples-to-oranges" combined assessment of fixed and mobile broadband services, which, as discussed below, are not close substitutes. This undermines the value of any assessment. The Commission's interpretation also may inhibit the adoption of technology-specific policy measures to remove barriers to deployment.

The Council agrees with various commenters, such as Verizon, that mobile broadband services have become omnipresent in the market and that the Commission should account for them in determining whether reasonable and timely advanced telecommunications capabilities are being offered.[6] The Council also agrees with other commenters, such as the rural incumbent

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4 *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 10-159, Seventh Broadband Progress Report and Order on Reconsideration, 26 FCC Rcd 8008, 8020, ¶ 16 (2011).

5 47 U.S.C. § 1302(d)(1).

6 *See* Comments of Verizon and Verizon Wireless on the Eighth Broadband Progress Notice of Inquiry, GN Docket No. 11-159 at 9-13 (Sept. 6, 2011).

telephone companies, that the Commission "should not equate mobile broadband services with high-capacity fixed broadband services, or treat the two as interchangeable substitutes for one another."[7] Clearly, wireline and mobile broadband services are not sufficiently close substitutes because the performance, coverage, and reliability capabilities differ significantly. Mobile broadband services generally offer lower data rates, have less, or at least more variable, coverage, and potentially greater congestion than wireline broadband services.[8]

The substantial differences between wireline and mobile broadband services permeates recent Commission actions and reports. For instance, the *National Broadband Plan* called for the establishment of both "healthy fixed and mobile broadband ecosystems."[9] Less than one year later, in the *Open Internet Order*, the Commission found that "Mobile broadband speeds, capacity, and penetration are typically much lower than for fixed broadband…In addition,

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7 *See* Comments of the Organization for the Promotion and Advanced of Small Telecommunications Companies, the National Telecommunications Cooperative Association, and the Western Telecommunications Alliance, GN Docket No. 11-121 at 11 (Sept. 6, 2011).

8 *See e.g.,* Statement of Milo Medin, Vice President, Google, who stated at the recent conference of the National Association of Local Telecommunications Officers and Advisors, "Wireless can't compete effectively with wireline technology like fiber, " *Communications Daily* at 14 (Sept. 26, 2011); William Lehr, Mobile Broadband and Implications for Broadband Competition and Adoption *available at:* http://www.broadbandforamerica.com/sites/default/themes/broadband/images/mail/LehrMobileandBroadbandCompetition.pdf. "Because it is reasonable to expect that mobile and fixed broadband will continue to be characterized by different service features, I expect that mobile and fixed broadband services will be perceived as distinct and complementary services, rather than as close service substitutes in most user/usage contexts. However, for some subscribers and in some contexts, mobile broadband may be perceived as an acceptable substitute and thereby mobile services will impose a degree of (intermodal) competitive discipline on broadband service markets in general, and on fixed broadband services more specifically. It is likely that mobile broadband will provide most direct competitive pressure on first-generation, lower-quality fixed broadband services."

existing mobile networks present operational constraints that fixed broadband networks do not typically encounter."[10] Further, the Commission's proposed reform of the Universal Service Fund includes a fund specifically dedicated to addressing a specific problem of mobile broadband deployment.[11] Even in the recently issued report, *Measuring Broadband America*, the Commission focused solely on assessing and comparing wireline broadband services while stating that it planned to measure separately mobile broadband performance at some later date.[12]

For years, in issuing Section 706 progress reports, the Commission adhered to an outdated performance benchmark of 200 kbps. Finally, in issuing the *2010 Sixth Broadband Progress Report*, the Commission caught up to the market and substantially increased this level. The time has come again for the Commission to recognize the market reality, follow the precedent in its other orders and reports, and separately assess fixed and mobile broadband services in the *Eighth Broadband Progress Report*.

B. Broadband performance has multiple attributes, but in the current market speed is by far the most important.

In its comments, the Telecommunications Industry Association ("TIA") asks that the Commission "not repeat the mistake of recent broadband reports by focusing exclusively on

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9 Omnibus Broadband Initiative, FCC, *Connecting America: The National Broadband Plan* at 146 (2010) ("*National Broadband Plan*").

10 *Preserving the Open Internet*, GN Docket No. 09-191, *Broadband Industry Practices*, WC Docket No. 07-52, Report and Order, FCC 10-201, ¶ 95 (rel. Dec. 23, 2010).

11 *See Connect America Fund et al.*, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, FCC 11-13 (released Feb. 9, 2011); *Universal Service Reform, Mobility Fund*, Notice of Proposed Rulemaking, 25 FCC Rcd 14716 (2010).

12 "Measuring Broadband America, A Report on Consumer Wireline Broadband Performance in the U.S.," FCC's Office of Engineering and Technology and Consumer and Governmental Affairs Bureau, Aug. 2, 2011 ("*Measuring Broadband America*").

speed as the defining characteristic of 'advance telecommunications capability.'"[13] Instead, TIA asks the Commission to evaluate broadband as consumers experience it – "functionally" and argues that the Commission "should consider the major features of broadband services that users care about, including mobility."[14] The Council agrees with TIA that broadband performance is determined by a variety of parameters. At the same time, in the current marketplace, especially for wireline broadband service, one parameter – speed – is the most critical and should continue to be employed by the Commission in the *Eighth Annual Progress Report*.[15] As the FCC notes, "Broadband throughput or speed…is the primary performance characteristic advertised by ISPs…A higher speed implies a higher information delivery rate."[16] The Commission thus employed speed as the key metric in its recent report, *Measuring Broadband America*. This metric also was relied upon by the Commission in issuing its *Broadband Speed Guide*[17] and *Household Broadband Guide*.[18] Hence, speed is the most relevant benchmark for wireline broadband service users and applications/content providers.

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13 *See* Comments of the Telecommunications Industry Association, GN Docket No. 11-121 at 8 (Sept. 6, 2011).

14 *See id.* at 9.

15 In appearing before the National Associations of Telecommunications Officers and Advisors' conference, Milo Medin, Vice President, Google, was reported to state that "speed is critical for application innovation and Google cares a lot about speed," *Communications Daily* at 14 (Sept. 26, 2011).

16 *Measuring Broadband America* at 12. The report also found that latency "is another key factor in broadband performance." *Id.* The Council agrees with the Commission, but, currently, latency is not the primary factor driving the selection of broadband service by most consumers. The Council hopes this situation evolves so users view latency metrics as critical, at which time the Commission should include it in its assessment.

17 *See* FCC Broadband Speed Guide, *available at* http://www.fcc.gov/guides/broadband-speed-guide ("*Broadband Speed Guide*").

18 *See* FCC Household Broadband Guide, *available at* http://www.fcc.gov/guides/household-broadband-guide ("*Household Broadband Guide*").

Finally, the Council believes the Commission, in making the Section 706 assessment, should use performance metrics that are critical to each segment of the broadband service market at that time. Moreover, the Commission should employ this benchmark in tandem with the Council's proposal in the prior section to assess separately broadband services that are not close substitutes. By making such distinctions, the Commission can provide users with more precise information about broadband performance.

C. Compression technologies, while important, have not obviated the need for higher performance (speed) benchmarks.

The Council recognizes that compression technologies have evolved significantly.[19] As a result, it is possible to transmit a standard definition video signal with sufficient quality at 2 Mbps and a high definition signal at 6 Mbps (relatively static) or 8 Mbps (fast action). Yet, this has not lessened the need for users to access higher speed broadband services. As discussed in the Council's initial comments, current and future applications require larger amounts of bandwidth because they are video-based.[20] In addition, the number of devices operating from each location has increased and is projected to increase significantly.[21] The Commission reflected this market reality in its Household Speed Guide, where it is suggested, for instance,

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19 *See e.g.*, Comments of AT&T Inc., GN Docket No. 11-121 at 22 (Sept. 6, 2011). AT&T also asserts that "the Commission's 1 Mpbs [upstream] threshold exceeds what is adequate for the most popular current applications" *Id.* at 23. The Council does not agree. It notes that the discussion in AT&T's comments is selective, not mentioning more bandwidth-intensive symmetric applications. Current applications that require greater upstream bandwidth include: P2P video, which continues in high volumes; short-form video, which users are producing more frequently; photo applications, which users regularly upload; and higher resolution video communications, which is becoming standard in PCs and other devices. These and other video and graphics-intensive applications should be expected to grow as broadband services providers make available offerings with higher speed symmetric capabilities.

20 *See* FTTH Council Comments at 5-10.

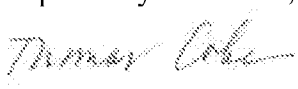
21 *Id.*

that a location with three simultaneous users with moderate use should have a broadband service with downstream speeds of between 6 and 15 Mbps.[22] The Council thus continues to urge the Commission to amend the definition of advanced telecommunications capability by increasing downstream and upstream speeds to 12 Mbps and 2.5 Mbps respectively, which reflect current average market offerings.

D. Conclusion

The FTTH Council appreciates the Commission's consideration of the issues it discusses herein. It stands ready to assist the Commission as it evaluates the market for advanced telecommunications services and drafts the *Eighth Broadband Progress Report*.

Respectfully submitted,



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22 *See Household Broadband Guide*.